Big Bang Theory

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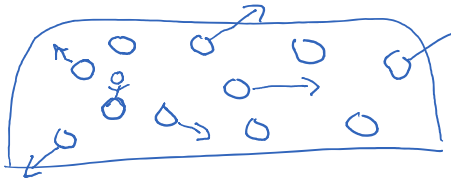
- the universe began as a tiny/pin-sized point of all matter, energy and space.
- the point rapidly expanded (why?) and became what the universe is today, in about 13.7 billion years.

Evidence that this happened:

- Cosmic Microwave Background Radiation
  - → heat left over from the Big Bang
  - → the infra red waves have been stretched through expansion to become microwaves. (Doppler Effect)
  - → 3°K (-273°C = 0°K, 0°K is as cold as we can get)
- Nucleosynthesis
  - → light elements (Hydrogen) can only form in the Big Bang.
- Hubble Expansion



= loaf of unrisen raisin bread

- each raisin represents a galaxy
- the dough between the raisins expands, more dough between will expand more, making it look like the raisin we are on is in the centre.
- the further away the raisins/galaxies are, the faster they move away.

- The visible universe only makes up 5-10% of the universe, the rest is dark matter and dark energy. (??)